

CLAIMS:

1. An optical system for a projection display device, comprising:
a first lens group having a first optic axis; and
a second lens group having a second optic axis, wherein the second lens group is adapted to rotate about the first optic axis.
2. The optical system of claim 1, including a display panel that provides an image to the first lens group and along the first optic axis.
3. The optical system of claim 2, wherein the display panel is a liquid crystal panel of a liquid crystal imaging system.
4. The optical system of claim 3, wherein the liquid crystal panel is a liquid crystal on silicon (LCOS) device.
- 4a. The optical system of claim 2, wherein the display panel is a DMD device.
- 4b. The optical system of claim 1, wherein the projection display is a scanning laser beam projection system
5. The optical system of claim 1, wherein the optical system is disposed over a base.
6. The optical system of claim 5, wherein the rotation is relative to the base.
7. The optical system of claim 2, wherein the image is projected onto a rear mirror of a rear projection display device.
8. The optical system of claim 1, wherein the rotation is counterclockwise or clockwise.

9. The optical system of claim 1, wherein the first lens assembly is disposed in a first tube and the second lens assembly is disposed in a second tube.

10. The optical system of claim 1, wherein both the first and second lens assemblies are disposed in a tube.

11. A rear projection display device which comprises the optical system as recited in claim 1.

12. An optical system for a projection display device, comprising:
a first optic axis; and
a lens group having a second optic axis,
wherein the lens group is adapted to rotate about the first optic axis.

13. The optical system of claim 12, including a display panel, which provides an image to the lens group and along the first optic axis.

14. The optical system of claim 12, wherein the display panel is a liquid crystal panel of a liquid crystal imaging system.

15. The optical system of claim 14, wherein the liquid crystal panel is a liquid crystal on silicon (LCOS) device.

16. The optical system of claim 12, wherein the display panel is a DMD device.

17. The optical system of claim 12, wherein the optical system is disposed over a base.

18. The optical system of claim 17, wherein the rotation is relative to the base.

19. The optical system of claim 2, wherein the image is projected onto a rear mirror of a rear projection display device.

20. The optical system of claim 12, wherein the rotation is counterclockwise or clockwise.

21. A rear projection display device including the optical system of claim 12.

22. A projection system according to any of the preceding claims, where the first optic axis is orthogonal to the second optic axis